

CLAIM AMENDMENTS

Claim 1 (currently amended):

A miter saw comprising:

a base adapted to support a workpiece during cutting;

a fence on the base;

a motor;

a rotatable blade driven by the motor;

a pivot arm assembly associated with the base and supporting the blade, where the pivot arm assembly is adapted to pivot toward and away from the base to move the blade toward and away from the base; and

a safety system having ~~one of the following alternative combinations of a detection subsystem and a reaction subsystem:~~

- i) ~~a detection subsystem adapted to detect contact between a person and the blade, where the detection subsystem includes a capacitive coupling between a sensor and the blade, and where the detection system is adapted to use the capacitive coupling to detect the contact between the blade and the person; and a reaction subsystem adapted to cause a predetermined action to take place upon detection of the contact by the detection subsystem;~~
- ii) ~~a detection subsystem adapted to detect contact between a person and the blade, and where the detection subsystem is further adapted to distinguish contact between a person and~~

~~the blade from contact between green wood and the blade;
and a reaction subsystem adapted to cause a predetermined
action to take place upon detection of the contact by the
detection subsystem; or~~

iii) ~~a detection subsystem adapted to detect the occurrence of
an unsafe condition between a person and the blade, and a
reaction subsystem adapted to mitigate the unsafe condition,
where the reaction subsystem includes at least one of the
following:~~

~~a. a brake mechanism positioned adjacent the blade and
adapted to engage the blade and further adapted to
maintain its position adjacent the blade when the blade
moves toward or away from the base;~~

~~b. a brake mechanism adapted to stop the blade from
moving toward the base upon detection of the unsafe
condition;~~

~~c. retraction mechanism adapted to retract the blade away
from the base upon detection of the unsafe condition;~~

~~d. a barrier mechanism adapted to place a barrier over at
least a part of the blade upon detection of the unsafe
condition;~~

- ~~e. a brake mechanism adapted to stop any rotation of the blade within 10 milliseconds after detection of the unsafe condition;~~
- ~~f. a brake adapted to stop any rotation of the blade by moving into contact with the blade, a stored energy source adapted to move the brake toward the blade, and a release system adapted to release the energy from the stored energy source when the detection subsystem detects the unsafe condition so that the brake starts moving toward the blade within 1 millisecond after the detection of the unsafe condition; and/or~~
- ~~g. a disabling mechanism adapted to disable at least a portion of the blade upon detection of the unsafe condition.~~

Claims 2-10 (cancelled).